

- (i) A is a bridging group containing a Group 13-15 element;
- (ii) each E is independently a Group 15 or 16 element covalently bonded to M;
- (iii) each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid;
- (iv) m and n are independently 1 or 2; and
- (v) p is the charge on the bidentate ligand such that the overall charge of LMX, is neutral;
- (c) each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from 2 to 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and
- (d) r is 1, 2 or 3;
- II) an activator compound; and
- III) a solid support wherein said transition metal connected to said bidentate ligand is immobilized on said support, where the transition metal loading is less than 100 micromoles transition metal per gram of solid support.

6. (Amended Six Times) A transition metal catalyst system for olefin polymerization comprising: I.) a Group -9, -10 or -11 metal connected to a bidentate ligand represented by the formula:

LMX, wherein:

- (a) M is a Group 9, 10 or 11 metal;
- (b) L is a bidentate ligand defined by the formula:



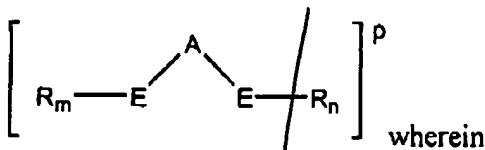
wherein

- (i) A is a bridging group containing a Group 13-15 element;
- (ii) each E is independently a Group 15 or 16 element covalently bonded to M;
- (iii) each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid;
- (iv) m and n are independently 1 or 2; and
- (v) p is the charge on the bidentate ligand such that the charge of LMX, is neutral;
- (c) each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from about 2 to about 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and
- (f) r is 1, 2 or 3;
- II) an activator compound, provided that the activator is not a Group 15 halide salt; and
- III) a solid support wherein said transition metal connected to said bidentate ligand is immobilized on said support.

13. (Amended Six Times) A transition metal catalyst, essentially without residual solvent, for olefin polymerization comprising: I.) a Group -9, -10 or -11 metal connected to a bidentate ligand represented by the formula:

LMX<sub>r</sub> wherein:

- (a) M is a Group 9, 10 or 11 metal;
- (b) L is a bidentate ligand defined by the formula:



wherein

- (i) A is a bridging group containing a Group 13-15 element;
- (ii) each E is independently a Group 15 or 16 element covalently bonded to M;
- (iii) each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid;
- (iv) m and n are independently 1 or 2; and
- (v) p is the charge on the bidentate ligand such that the overall charge of LMX, is neutral;
- (g) each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a neutral hydrocarbyl-containing donor ligand; a univalent anionic ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from about 2 to about 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and
- (h) r is 1, 2 or 3;
- II) an activator compound; and
- III) a solid support wherein said transition metal connected to said bidentate ligand is immobilized on said support, where the transition metal loading is less than 100 micromoles transition metal per gram of solid support.

17. (Amended Five Times) The catalyst system of claims 1, 6, or 13 wherein said activator comprises an alkylalumoxane, a modified alkylalumoxane, an aluminum alkyl, an aluminum alkyl halide, an aluminum halide, an ionizing anion precursor compound and or a noncoordinating anion precursor.

18. (Amended Once) The catalyst system of claim 17 wherein the noncoordinating anion precursor comprises tetrakis(pcfuorophenyl)boron.

19. (Amended Four Times) The catalyst system of claim 1 or 6 wherein the activator comprises a halide salt of Group-13-16 metals or metalloids.
20. (Three Times Amended) The catalyst system of claim 18 wherein the catalyst-precursor-to-noncoordinating-anion-precursor molar ratio is from 10:1 to 1:10.
30. (Amended Twice) The catalyst system of claim 17 wherein LMX<sub>x</sub> has a square planar geometry.
33. (Amended Once) The catalyst system of claim 17 wherein the support comprises silica.
34. Cancelled
35. (Amended Once) The catalyst system of claim 17 wherein the metal M of the catalyst precursor is a first row transition metal.
36. (Amended Once) The catalyst system of claim 17 wherein the bridging group A of the bidentate ligand comprises at least one conjugated group.
37. Cancelled.
38. Cancelled.
39. (Once Amended) The catalyst of claim 17 wherein the catalyst-precursor-to-alumoxane molar ratio is from 1:500 to 10:1.
40. The catalyst system of claim 17 wherein the M is Ni.
41. (Once Amended) The catalyst system of claim 1, 6, or 13, wherein the activator comprises methylalumoxane and/or modified methylalumoxane.
42. (Once Amended) The catalyst system of claim 19, wherein a total transition metal compound to noncoordinating anion precursor mole ratio is from 10:1 to 1:10.

Please add the following new claims:

43. (new) A catalyst composition comprising:  
 (1) a transition metal compound represented by the formula:

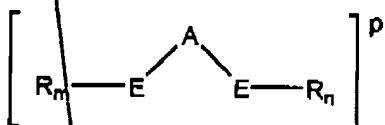


wherein

M is a group 9, 10 or 11 transition metal;  
 each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from 2 to 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and

r is 1, 2 or 3;

L is a bidentate ligand defined by the formula:



wherein:

A is a bridging group containing a Group 13-15 element;  
 each E is independently a Group 15 or 16 element covalently bonded to M;  
 each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid,

m and n are independently 1 or 2 depending on the valency of E;

p is the charge on the bidentate ligand such that the overall charge of LMX<sub>r</sub> is neutral;

(2) an activator comprising one or more non-coordinating precursors; and  
 (3) a solid support.

44. (new) The catalyst system of claim 43 wherein M comprises one or more of Ni, Pd, Pt, Cu. or Co.

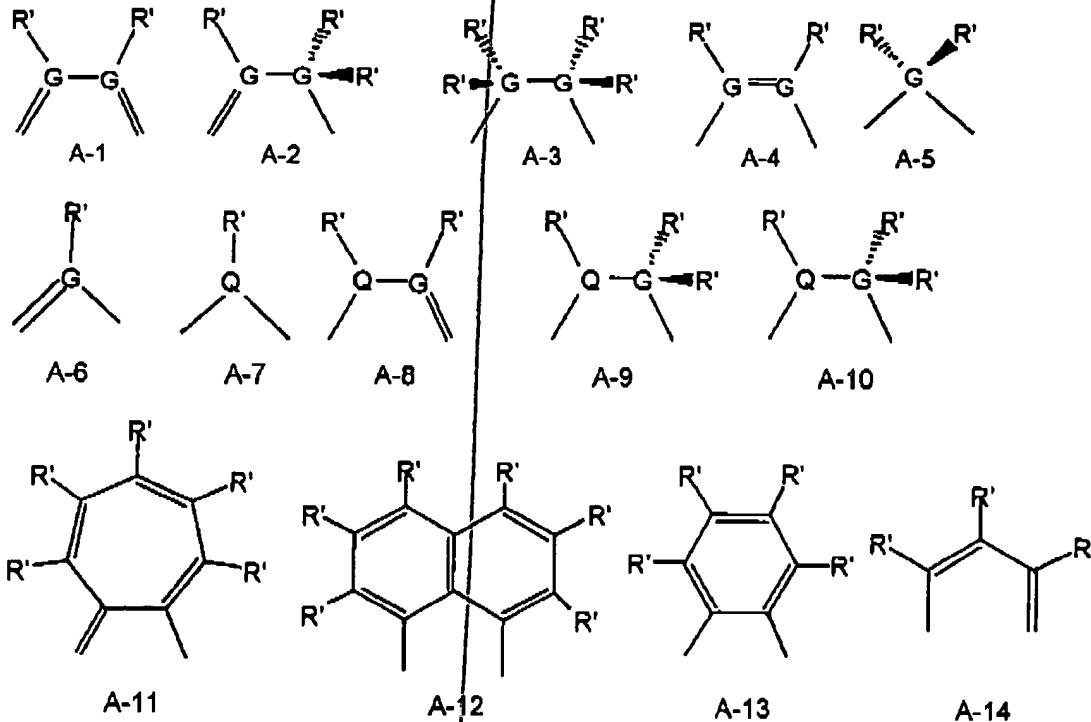
45. (new) The catalyst system of claim 43 wherein the transition metal compound-to-noncoordinating-anion molar ratio is from 10:1 to 1:10.

46. (new) The catalyst system of claim 43 wherein A has at least one conjugated group.

47. (new) The catalyst system of claim 43 wherein the transition metal is present on the support at less than 100 micromoles transition metal per gram of solid support.

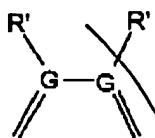
48. (new) The catalyst system of claim 43 wherein M is nickel.

49. (new) The catalyst compound of claim 43 wherein A is defined by the following formulae:



wherein G is a Group 14 element especially; Q is a Group 13 element; and R' are independently hydride radicals, C<sub>1</sub>-C<sub>30</sub> hydrocarbyl radicals, substituted hydrocarbyl radicals, halocarbyl radicals, substituted halocarbyl radicals, and hydrocarbyl- and halocarbyl-substituted organometalloid radicals, and optionally two or more adjacent R' may form one or more C<sub>4</sub> to C<sub>40</sub> rings to give a saturated or unsaturated cyclic or polycyclic ring.

50. (new) The catalyst compound of claim 43 wherein M is nickel, E is nitrogen, m is 1, n is 1, p is 0, A is defined by the formula:



where each G is, independently, C, Si, or Ge, and each R' is a substituted phenyl group.

51. (new) A catalyst composition comprising the combination of a transition metal compound, an alumoxane and a support wherein the transition metal compound has the formula:



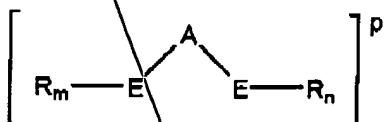
wherein

M is a group 9, 10 or 11 transition metal;

each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from 2 to 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and

r is 1, 2 or 3;

L is a bidentate ligand defined by the formula:



wherein:

A is a bridging group containing a Group 13-15 element;

each E is independently a Group 15 or 16 element covalently bonded to M;

each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid;

m and n are independently 1 or 2 depending on the valency of E;

p is the charge on the bidentate ligand such that the overall charge of LMX<sub>r</sub> is neutral.

52. (new) The catalyst system of claim 51 wherein M is one or more of Ni, Pd, Pt, Cu or Co.

53. (new) The catalyst system of claim 51 wherein the alumoxane comprises a modified alumoxane.

54. (new) The catalyst composition of claim 51 wherein the support comprises silica.

55. (new) The catalyst composition of claim 51 wherein the alumoxane comprises methylalumoxane.

56. (new) The catalyst system of claim 51 wherein the alumoxane comprises modified methylalumoxane.

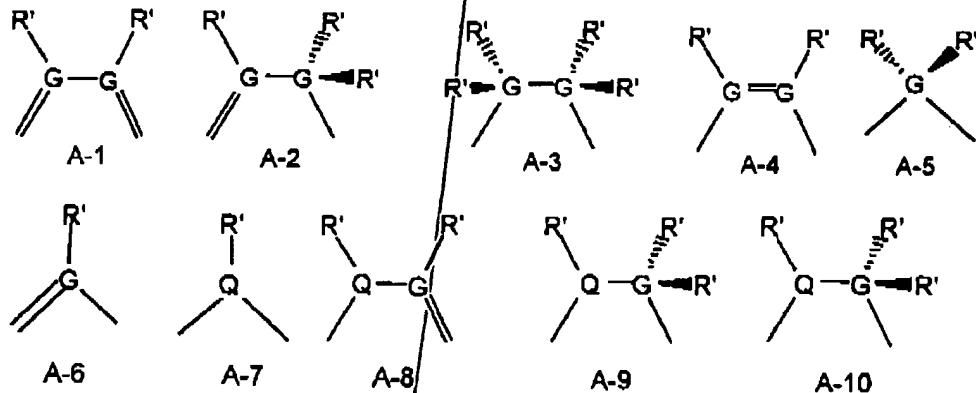
57. (new) The catalyst system of claim 51 wherein the alumoxane comprises an alkyl alumoxane.

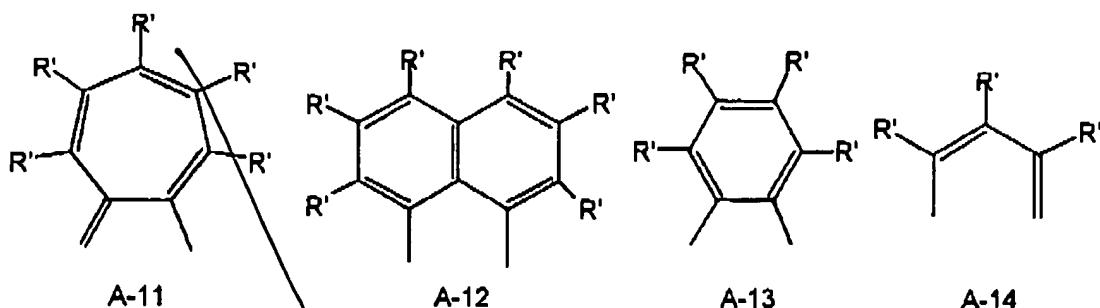
58. (new) The catalyst system of claim 51 wherein A has at least one conjugated group.

59. (new) The catalyst of claim 51 wherein the catalyst compound-to-alumoxane molar ratio is from 1:500 to 10:1.

60. (new) The catalyst system of claim 51 wherein M is nickel.

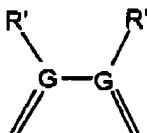
61. (new) The catalyst compound of claim 51 wherein A is defined by the following formulae:





wherein G is a Group 14 element especially: Q is a Group 13 element; and R' are independently hydride radicals, C<sub>1</sub>-C<sub>30</sub> hydrocarbyl radicals, substituted hydrocarbyl radicals, halocarbyl radicals, substituted halocarbyl radicals, and hydrocarbyl- and halocarbyl-substituted organometalloid radicals, and optionally two or more adjacent R' may form one or more C<sub>4</sub> to C<sub>40</sub> rings to give a saturated or unsaturated cyclic or polycyclic ring.

62. (new) The catalyst compound of claim 51 wherein M is nickel, E is nitrogen, m is 1, n is 1 p is 0, A is defined by the formula:



where each G is, independently, C, Si, or Ge, and each R' is a substituted phenyl group.

63. (new) A catalyst composition, essentially without residual solvent, comprising the combination of a transition metal compound, an activator and a support wherein the transition metal compound has the formula:

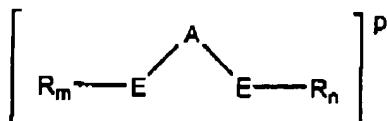


wherein

M is a group 9, 10 or 11 transition metal;  
 each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring

containing from 2 to 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and  
 r is 1, 2 or 3;

L is a bidentate ligand defined by the formula:



wherinc:

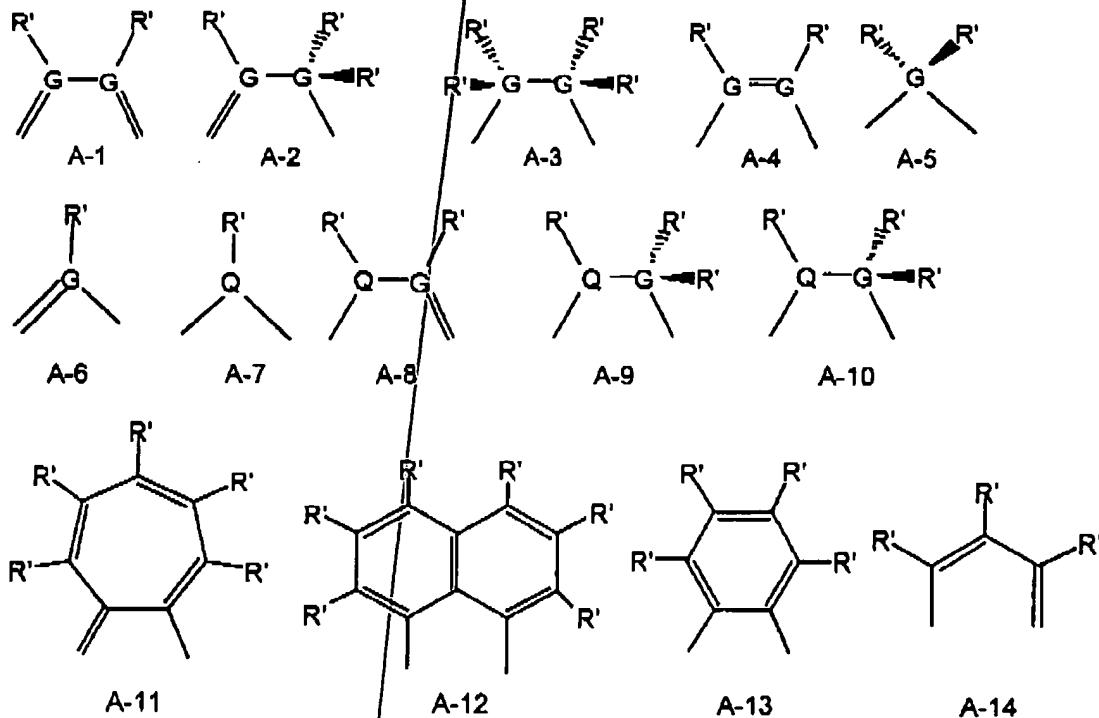
A is a bridging group containing a Group 13-15 element;  
 each E is independently a Group 15 or 16 element covalently bonded to M;  
 each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, or halocarbyl-substituted organometalloid,  
 m and n are independently 1 or 2 depending on the valency of E;  
 p is the charge on the bidentate ligand such that the overall charge of LMX<sub>r</sub> is neutral,  
 and wherinc the support is selected from the group consisting of Group 2, 3, 4, 5, 13, and 14 metal or metalloid oxides.

64. (new) The catalyst system of claim 63 wherein the activator comprises a non-coordinating anion.
65. (new) The catalyst system of claim 63 wherein the activator comprises an alumoxane.
66. (new) The catalyst composition of claim 63 wherein the support comprises silica.
67. (new) The catalyst composition of claim 63 wherein the activator comprises tetrakis(perfluorophenyl)boron.
68. (new) The catalyst system of claim 64 wherein the noncoordinating anion is a halide salt of Group-13-16 metals or metalloids.
69. (new) The catalyst system of claim 65 wherein the catalyst-compound-to-noncoordinating-anion precursor molar ratio is from 10:1 to 1:10.
70. (new) The catalyst system of claim 63 wherein A has at least one conjugated group.

71. (new) The catalyst of claim 65 wherein the catalyst compound-to-alumoxane molar ratio is from 1:500 to 10:1.

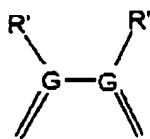
72. (new) The catalyst system of claim 63 wherein M is nickel.

73. (new) The catalyst compound of claim 63 wherein A is defined by the following formulae:



wherein G is a Group 14 element especially; Q is a Group 13 element; and R' are independently hydride radicals, C<sub>1</sub>-C<sub>30</sub> hydrocarbyl radicals, substituted hydrocarbyl radicals, halocarbyl radicals, substituted halocarbyl radicals, and hydrocarbyl- and halocarbyl-substituted organometalloid radicals, and optionally two or more adjacent R' may form one or more C<sub>4</sub> to C<sub>40</sub> rings to give a saturated or unsaturated cyclic or polycyclic ring.

74. (new) The catalyst compound of claim 63 wherein M is nickel, E is nitrogen, m is 1, n is 1, p is 0, A is defined by the formula:



where each G is, independently, C, Si, or Ge, and each R' is a substituted phenyl group.

75. A process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>8</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with the composition of claim 1, 6, 13, or 43.
76. (new) The polymerization process of claim 75 comprising conducting the contacting step under gas phase polymerization conditions.
77. (new) The polymerization process of claim 76 wherein the reactor temperature is from -100 °C to 150 °C and at a pressure up to 7000 kPa.
78. (new) The polymerization process of claim 75 additionally comprising a scavenging compound.
79. (new) The polymerization process of claim 75 comprising conducting the contacting step under slurry polymerization conditions.
80. (new) The polymerization process of claim 79 wherein the reactor temperature is from 0 °C to 150 °C and at a pressure from 0.76 MPa to 4.8 MPa.
81. (new) A polymerization process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>8</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with the composition of claim 50.
82. (new) A polymerization process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>8</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with the composition of claim 51.

83. (new) The polymerization process of claim 82 comprising conducting the contacting step under gas phase polymerization conditions.
84. (new) The polymerization process of claim 83 wherein the reactor temperature is from -100 °C to 150 °C and at a pressure up to 7000 kPa.
85. (new) The polymerization process of claim 82 additionally comprising a scavenging compound.
86. (new) The polymerization process of claim 82 comprising conducting the contacting step under slurry polymerization conditions.
87. (new) The polymerization process of claim 86 wherein the reactor temperature is from 0 °C to 150 °C and at a pressure from 0.76 MPa to 4.8 MPa.
88. (new) A polymerization process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>8</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with the composition of claim 62.
89. (new) A polymerization process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>8</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with the composition of claim 63.
90. (new) The polymerization process of claim 89 comprising conducting the contacting step under gas phase polymerization conditions.
91. (new) The polymerization process of claim 90 wherein the reactor temperature is from -100 °C to 150 °C and at a pressure up to 7000 kPa.
92. (new) The polymerization process of claim 89 additionally comprising a scavenging compound.

93. (new) The polymerization process of claim 89 comprising conducting the contacting step under slurry polymerization conditions.

94. (new) The polymerization process of claim 93 wherein the reactor temperature is from 0 °C to 150 °C and at a pressure from 0.76 MPa to 4.8 MPa.

95. (new) A polymerization process for polymerizing olefinically unsaturated monomers comprising contacting one or more of ethylene, C<sub>3</sub>-C<sub>20</sub> olefin, C<sub>4</sub>-C<sub>20</sub> cyclic olefin, C<sub>4</sub>-C<sub>20</sub> non-conjugated diolefin, C<sub>6</sub>-C<sub>20</sub> aromatic substituted olefin, C<sub>4</sub>-C<sub>20</sub> gem-substituted olefins, or C<sub>20</sub>-C<sub>1000</sub> olefin macromer with a catalyst composition comprising the combination of a transition metal compound, an activator and a support wherein the transition metal compound has the formula:



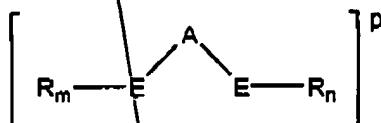
wherein

M is group 9, 10 or 11 metal;

each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometallic or halocarbyl-substituted organometallic; a univalent anionic ligand; a neutral hydrocarbyl-containing donor ligand; a neutral non-hydrocarbyl atom containing donor ligand; or two Xs are joined and bound to the metal atom to form a metallacycle ring containing from 2 to 20 carbon atoms; or two Xs are joined to form an anionic chelating ligand; and

r is 1, 2 or 3;

L is a bidentate ligand defined by the formula:



wherein:

A is a bridging group containing a Group 13-15 element;

each E is independently a Group 15 or 16 element covalently bonded to M;

each R is independently a C<sub>1</sub>-C<sub>30</sub> radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometallic, or halocarbyl-substituted organometallic;

m and n are independently 1 or 2 depending on the valency of E;

p is the charge on the bidentate ligand such that the overall charge of LMX<sub>r</sub> is neutral.

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96 97. (new) The catalyst system of claim 43 wherein the activator comprises a non-coordinating anion.

97 98. (new) The catalyst system of claim 43 wherein the activator comprises an alumoxane.

98 99. (new) The catalyst composition of claim 43 wherein the support comprises silica.

99 100. (new) A catalyst system comprising the combination of the catalyst compound of claim 43 and tetrakis(perfluorophenyl)boron.

100 101. The catalyst system of claim 6 wherein the system is essentially without residual solvent.

101 102. The process of claim 95 wherein the activator comprises an alumoxane.

102 103. The process of claim 95 wherein the activator comprises a non-coordinated anion.

103 104. The process of claim 95 wherein the activator comprises a Group 13, 14, or 16 halide salt.

104 105. The process of claim 95 wherein the activator comprises a group 15 oxyfluoride salt.

105 106. The process of claim 95 wherein the activator comprises  $\text{BF}_4^-$ ,  $\text{PF}_6^-$ ,  $\text{TeOf}_6^-$  and/or  $\text{AsF}_6^-$ .

106 107. The process of claim 95 wherein the support comprises a non-coordinating anion chemically bound to the support.

107 108. The process of claim 95 wherein the support comprises a polymeric support.

108 109. The process of claim 95 wherein the support comprises one or more Group 2, 3, 4, 5, 13, or 14 metal or metalloid oxides.

109 110. The process of claim 95 wherein the support comprises one or more of magnesia, titania, or zirconia.

110 111. The process of claim 95 wherein the support has a pore size of from 10 to 1000 Å.

R 126 112. The process of claim 95 wherein the support has a surface area of 10-700 m<sup>2</sup>/g.

112 113. The process of claim 95 wherein the support has a pore volume of 0.1 to 4 cc/g.

113 114. The process of claim 95 wherein the support has an average particle size of 10-500 μm.

114 115. The process of claim 95 wherein the support has:

- a surface area of 50 to 500 m<sup>2</sup>/g;
- a pore volume of 0.5 to 3.5 cc/g;
- an average particle size of 20 to 200 μm; and
- a pore size of 50 to 500 Å.

115 116. The process of claim 95 wherein the transition metal compound is present on the support at a loading of 10-100 μm of transition metal compound per gram of support.

116 117. The process of claim 116 wherein the loading is 20 to 80 μmoles transition metal compound per gram of support.

117 118. The process of claim 116 wherein the loading is 40 to 60 μmoles of transition metal compound per gram of support.

118 119. The composition of claim 1, 6, 13, 43, 51, 63 wherein the transition metal compound is present on the support at a loading level of 10-100 μmoles of transition metal compound per gram of support.

119 120. The composition of claim 1, 6, 13, 43, 51, 63 wherein the transition metal compound is present on the support at a loading level of 20-80 μmoles of transition metal compound per gram of support.

120 121. The composition of claim 1, 6, 13, 43, 51, 63 wherein the transition metal compound is present on the support at a loading level of 40-60 μmoles of transition metal compound per gram of support.